

Serial No.: 09/820,514

Attorney's Docket No.:10559/394001/P10259
Intel CorporationAmendment to the Claims:

This listing of claims replaces all prior versions, and
listings, of claims in the application:

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1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) The method of claim 1, A method for
use in a pipelined processor including a pipeline having a
plurality of stages, the method comprising:

storing a first updated data address value in a future
file;

generating a second updated data address value from said
first updated data address value;

updating the future file with the second updated data
address value without terminating an instruction associated with
the second updated data address value in the pipeline; and

further comprising storing a committed data address value
in an architectural file.

4. (Original) The method of claim 3, further comprising:
cancelling an instruction in the pipeline; and

Serial No.: 09/820,514

Attorney's Docket No.:10559/394001/P10259
Intel Corporation

restoring the future file to a valid state by writing the committed data address value in the architectural file to the future file.

5. (Currently Amended) The method of claim #3, wherein generating the second updated data address value comprises calculating the second updated data address value with a data address generator in an address calculation stage of the pipeline.

6. (Currently Amended) The method of claim #3, further comprising providing the future file in a decode stage of the pipeline.

7. (Currently Amended) The method of claim #3, wherein storing the first updated data address value comprises storing at least one of an index value, a length value, a base value, and a modify value in the future file.

8. (Cancelled)

9. (Cancelled)

Serial No.: 09/820,514

Attorney's Docket No.: 10559/394001/P10259
Intel Corporation

10. (Currently Amended) ~~The article of claim 8, An article comprising a machine-readable medium which stores machine-executable instructions, the instructions causing a machine to:~~
~~store a first data address value in a future file;~~
~~generate a second updated data address value from said first data address value;~~
~~update the future file with the second updated data address value without terminating an instruction associated with the second updated data address value in a pipeline; and~~
~~further comprising instructions which cause the machine to~~
store a committed data address value in an architectural file.

11. (Original) The article of claim 10, further comprising instructions which cause the machine to:
cancel an instruction in the pipeline; and
restore the future file to a valid state by writing the committed data address value in the architectural file to the future file.

12. (Currently Amended) The article of claim ~~8~~¹⁰, wherein the instructions which cause the machine to generate the second updated data address value comprise instructions which cause the machine to calculate the second updated data address value with

Serial No.: 09/820,514

Attorney's Docket No.: 10559/394001/P10259
Intel Corporation

a data address generator in an address calculation stage of the pipeline.

13. (Currently Amended) The article of claim 810, further comprising instructions which cause the machine to provide the future file in a decode stage of the pipeline.

14. (Currently Amended) The article of claim 810, wherein the instructions which cause the machine to store the first updated data address value comprise instructions which cause the machine to store at least one of an index value, a length value, a base value, and a modify value in the future file.

15. (Cancelled)

16. (Currently Amended) The processor of claim 158, wherein said two or more stages include a decode stage, an address calculation stage, an execution stage, and a write back stage.

17. (Original) The processor of claim 16, wherein the future file is located in the decode stage and the data address generator is located in the address calculation stage.

Serial No.: 09/820,514

Attorney's Docket No.:10559/394001/P10259
Intel Corporation

18. (Currently) The processor of claim 15, A processor comprising:

a pipeline comprising two or more stages;

a future file operative to store one or more data address values;

a data address generator operative to generate an updated data address value from one or more of said data address values;

an update bus connected between the data address generator and the future file and operative to write the updated data address value to the future file without terminating an instruction associated with the updated data address value in the pipeline; and

further comprising an architectural file operative to store committed data addresses values.

19. (Original) The processor of claim 18, further comprising a restore bus connected between the architectural file and the future file; and

a control unit operative to write the committed data address values from the architectural file to the future file via the restore bus in response to the pipeline being cancelled.

Serial No.: 09/820,514

Attorney's Docket No.: 10559/394001/P10259
Intel Corporation

20. (Currently Amended) The processor of claim 1518,
wherein the ~~first~~ updated data address value includes at least
one of an index value, a length value, a base value, and a
modify value.

21. (Currently Amended) The processor of claim 1518,
wherein the processor comprises a digital signal processor.

22. (Cancelled)

23. (Currently Amended) The system of claim 2225, wherein
said two or more stages include a decode stage, an address
calculation stage, an execution stage, and a write back stage.

24. (Original) The system of claim 23, wherein the future
file is located in the decode stage and the data address
generator is located in the address calculation stage.

25. (Currently Amended) The system of claim 22, A system
comprising:

a static random access memory; and
a processor coupled to the static random access memory and
including

Serial No.: 09/820,514

Attorney's Docket No.: 10559/394001/P10259
Intel Corporation

a pipeline comprising two or more stages,
a future file operative to store one or more data
address values,
a data address generator operative to generate an
updated data address value from one or more of said data address
values;
an update bus connected between the data address
generator and the future file and operative to write the updated
data address value to the future file without terminating an
instruction associated with the updated data address value in
the pipeline; and
~~further comprising an architectural file operative to store~~
committed data addresses values.

26. (Original) The system of claim 25, further comprising a restore bus connected between the architectural file and the future file; and

a control unit operative to write the committed data address values from the architectural file to the future file via the restore bus in response to the pending pipeline instructions being cancelled.

Serial No.: 09/820,514

Attorney's Docket No.:10559/394001/P10259
Intel Corporation

27. (Currently Amended) The system of claim 2225, wherein the first updated data address value includes at least one of an index value, a length value, a base value, and a modify value.

28. (Currently Amended) The system of claim 2225, wherein the processor comprises a digital signal processor.